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ABSTRACT

The use of faculty activity data in higher education is discussed and the issue of whether the chairperson or the faculty member's estimates of how time was spent should determine resource expenditures is addressed. A historical review indicates that this type of data has been a concern of higher education for the past three decades. This information has been used to assure equity of teaching loads, justify budget requests, and identify staff needs. The topic of faculty workload and the reporting of faculty effort has received growing attention with the advent of detailed cost studies, cost allocation resource models, and collective bargaining. Numerous problems inherent in the collecting and reporting of faculty activity data are discussed. It is suggested that one of the decisions university administrators must make is whether faculty assignment data or faculty-reported data should be utilized. A study conducted at Florida Technological University revealed a high degree of similarity between assigned and reported faculty activity data. The results indicate that in general faculty report a smaller proportion of their effort is spent on scheduled instructional activities than has been assigned and more on the noninstructional activities. Cost analysis outputs may be somewhat different depending upon whether assigned or reported activity data are used. It is suggested that the difference associated with the two methods would tend to decrease the instructional costs and increase the community service and noninstructional costs if faculty data were utilized. (SF)

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FACULTY ACTIVITY ASSIGNMENT VERSUS FACULTY EFFORT

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FACULTY ACTIVITY ASSIGNMENT VERSUS FACULTY EFFORT

The topic of faculty workload and the reporting of faculty effort has received intermittent attention throughout the past three decades. With the advent of detailed cost studies, cost allocation resource models, and collective bargaining, the issue is once again being considered. Although we, as faculty, must have the right to determine how we allocate our time among the various assigned tasks of teaching, research, and service, the chairperson has the responsibility to determine how resources are to be allocated among the various elements that constitute a faculty assignment.

In addition to the cost related factors, faculty activity data have been used in the evaluation process, promotion process, tenure determination process, external reporting function and planning function. Chairpersons can and do use faculty assignments to direct faculty activity and modify faculty behavior so as to accomplish the established goals and objectives of the administrative unit.

One of the basic decisions university administrators must make is whether faculty assignment data or faculty reported effort data should be utilized. Both sets of data have inherent shortcomings. However, the issue of whether the chairperson should determine how the resources are expended or whether the faculty member's estimates of how he spent his time should determine resource expenditures must be addressed.

Purpose

The purposes of this study were:

1. To determine if the portion of assigned effort was equivalent to portion of reported effort by activity category at the University, college, and discipline levels.

2. To determine the degree of association between the assigned and reported effort measures by activity category.

3. To determine if differences between the assigned and the reported patterns were uniform among colleges.

Historical Perspective

The use of faculty activity data is not new to higher education. These data have been a concern of legislative bodies, as well as governing boards for the past three decades. Stecklein (1974) reported that in the early 1950's the emphasis on faculty activity information was on summary data collected through ad hoc surveys. This information was used to assure equity of loads, justify budget requests, and identify staff needs. In 1954 the Western Conference Institutions and the University of California developed a faculty workload study for cost analysis purposes that included both direct and indirect cost measures. This study was supported by the Fund for the Advancement of Education. By the mid-1950's some institutions were collecting faculty load data in a systematic manner, some institutions used formula generated data while others used self reported data. By the end of the 1950's numerous institutions had addressed the faculty activity issue. Stecklein (1974) reported that the American Council on Education held its first conference on the topic. The conference concerned the how to, what for and problems of collecting faculty activity data. During the 1960's when statewide systems became common and coordinating and/or management boards became the modus operandi, increased attention was given to faculty activity data. What had been an ad hoc process addressing selected workload measures became a systematic process that addressed workload measures in several areas of instruction, research and service. Some systems were based on chairperson input whereas others were based on faculty reported output measures. In 1965 the Wisconsin legislature called for a study of faculty time in all state universities (Stecklein, 1974).

The faculty activity issue received additional impetus during the late 1960's and early 1970's. The National Center of Higher Education Management Systems (NCHEMS) and numerous state systems became actively involved in defining and developing faculty activity systems. Institutions collected data in a systematic manner and maintained data on computer files. Although the initial purpose of the NCHEMS process was to distribute faculty compensation among appropriate cost centers, the scope of the project was broadened to include planning and management, institutional research studies, and external reporting in addition to distributing faculty compensation among appropriate cost centers (Stecklein, 1974). In the NCHEMS process faculty members reported their effort in terms of average number of hours per week on a post hoc activity form. The multipurpose usage of faculty activity data that had been collected for a single purpose caused faculty to become very skeptical and vocal of the process. This skepticism became more ingrained with the involvement of collective bargaining and militant faculty groups.

At the current time faculty activity analyses have become a way of life. With the advent of massive management information systems at both the institutional and system level, and numerous accountability measures imposed by board staffs, legislative staffs, and state law, faculty activity reporting has become commonplace. These data have been used for external reporting purposes and as the primary basis for cost analysis studies. In addition, it has been proposed that allocations based on cost study data will be the ultimate solution for equitable allocation among institutions within a system and among programs within an institution. Also, federal and state agencies have used these data to determine if they have received an appropriate portion of a faculty member's effort when external contracts are involved.

Numerous groups have elected to take an anatomical look at faculty activity data in an attempt to glean meaning from the readily accessible data. In 1971 the Kansas legislature froze salaries at the previous year's level while there was a surplus in the state coffer. It was reported that state officials were convinced that Kansas College and Universities were quite well off, that legislative officials did not know what faculty activity involved, and that university representatives had not communicated the activities of the faculty and staff in quantifiable terms (Tarrant, 1975).

In 1971 and again in 1974 a statewide faculty activity study was completed. The results of these studies evidenced there were major cost differences among discipline and level of instruction, that faculty workload had increased, that faculty spent about 56 hours a week on all activities, and that faculty spent about two-thirds of their time on teaching activities (Tarrant, 1975). Although these studies provided valuable information for external reporting, institutional planning, and cost analysis, Tarrant (1974) reported the following:

1. the study revealed considerable quantifiable data, but little in terms of data that could be labeled as significant or surprising.

2. the data provided a ready source for introducing comparative analysis when such analysis was ill advised.

3. the study was a costly process.

4. the process provided an intensification of the faculty--administrative cold war.

Studies have revealed numerous inherent problems associated with the collecting and reporting of faculty activity data. Laughlin and Sestrad (1976) reported that the pressures of declining enrollment, tenure insecurity, student evaluation, and increased productivity expectations as well as the differing perceptions of faculty duties in areas such as faculty load, quality education, productivity, allocation of effort, evaluation, research, publication, and activity analysis have invited conflict with faculty, administrators, board members, and legislative bodies.

The issue of self reported faculty activity data has been well researched. Numerous researchers have used various procedures such as logs and diaries to validate self-reported results. In a study completed at five Midwest institutions Wendel (1977) reported that on the average, faculty spend more than 50 hours per week completing their various duties. He concluded that faculty may do too many things and spend too much time on areas that do not support the purpose and mission of the institution. In addition he stated that if priority of task and responsibility were established, they may increase their relative efficiency. Sullivan (1973) reported on a study which was designed to examine whether there was bias in reporting time/effort through the use of questionnaires. His study involved a diary validation of questionnaire reported data. Sullivan reported:

1. there is a distinct possibility that the self reported questionnaire procedure will lead to bias in reporting estimates of time/effort data.

2. when accurate estimates are needed, the diary process should be used.

3. faculty and groups of faculty differ in their tendency to bias questionnaire responses.

In the process of briefing faculty, Sullivan (1973) found, as others have, that faculty were apprehensive about the use or misuse of activity data and viewed the process as a threat inpinging on their academic freedom. Therefore, he concluded it would be impossible to accurately measure output of faculty resources through self reported processes.

Blackburn (1974) challenged the anatomical approach of institutional research on faculty workload and questioned the appropriateness of current faculty activity analysis. He also questions the fundamental assumption that breaking down and analyzing academic workload efforts into separate roles and minute parts will produce an understanding of the whole. He argues that research efforts to ascertain meaning from faculty workload efforts will continue to fail because of basic methodological and conceptual fallacies. Further, these efforts somehow miss the essence of effort in academia.

In general it can be said that numerous efforts have been undertaken to describe what faculty effort involves and to dichotomize the total effort. However, external groups question both the veracity of the reports and the appropriateness of the procedures. Research reveals bias in self report post hoc data and skepticism among those who complete the reports.

Methodology

The faculty activity assignment procedure used at Florida Technological University during 1976-77 provided both assignment of effort and the post hoc reporting of estimated average hours worked per week in each assigned activity category. Appendix A provides a copy of the faculty activity form utilized. A stratified random sample of the Faculty Activity Assignment Reports was selected from those submitted during the 1976-77 academic year. The selection process provided an equal number of reports from each term for those disciplines included. When a discipline encompassed an entire college, ten reports were selected per term. In each of the remaining disciplines, five reports were selected per term. The data reported on the Faculty Activity Assignment form included the portion of full time equivalent effort, as reported by the chairperson, and estimated average hours worked per week, as reported by the faculty member. The hours per week figures were converted to portion of full time equivalent (FTE) effort by dividing the number of hours reported in each category by the total number of hours reported and multiplying by total FTE. Due to the limited number of faculty assigned community education and institutes and research center activities, both areas were delted from the analysis.

The research design contrasted the proportion of effort assigned by the chairperson with the proportion of effort reported by the individual faculty member. Data were stratified by discipline. A Paired T test was used to test the null hypotheses of no difference between assigned and reported mean FTE's by activity category at the discipline, college, and university levels. Disciplines were aggregated as necessary for the college and university analyses. In addition, a Pearson Product Moment Correlation Coefficient was computed for each activity category to determine the degree of association between the two methods of reporting faculty activity.

An ANOVA design was used to determine if assigned and reported mean FTE differences were uniform among colleges by activity category. A Newman-Keuls procedure was used to identify the between-mean differences when an initial difference was evidenced.

Presentation and Analysis of Data

The analysis of the faculty assigned and reported activity data revealed a high degree of similarity among the two procedures. To facilitate the interpretation and understanding of these findings, the material has been organized by university, college, and discipline.

Table 1 provides a summary of reported and assigned mean FTE's, correlation coefficients, computed T values, and degrees of freedom by activity category. These data are summarized at the university level and provide a comparison between the mean FTE assigned and the mean FTE reported measures by activity category. These findings evidenced a striking similarity among the mean FTE values for each activity category. The null hypothesis of no difference was rejected at the 10% level of significance in the lower instruction, upper instruction, community service, management, and faculty development activity categories. A comparison of the mean FTE's revealed that faculty reported a smaller proportion of effort on scheduled instructional activities (lower instruction and upper instruction) than the chairperson had assigned and a larger proportion on the non-instructional activities (community service, university governance, and faculty development). Although significant differences were not observed in the other activity categories, a similar pattern was observed in which unscheduled activity reported mean FTE's were somewhat greater than assigned mean FTE's. Since faculty members customarily report in excess of 50 hours per week in carrying out their assigned activities, this sort of variance is understandable. Table 1 also provides a summary of the Pearson Product Moment Correlation Coefficients by activity category. These coefficients reveal a high degree of association between the two measures of faculty activity. A high to moderate correlation coefficient was observed for each of the activity categories. Even though differences may exist between the mean FTE's values, the high correlation coefficient provides evidence which indicates that a considerable amount of the variability evidenced by using either procedure could be accounted for by the other procedure.

Table 2 provides a comparison of the assigned and reported mean FTE's by activity category and college. Only those activity categories in which differences were observed at the university level and those included in the instructional category (SUS definition) were included in this summary. These findings revealed some differences among colleges. However, in general the pattern evidenced at the university level was maintained at the college level. The null hypotheses of no difference between reported and

TABLE 1

Summary Comparison of Reported and Assigned Mean FTE's, Correlation Coefficients, T value, and Degrees of Freedom by Activity Category

Activity Category	Mean FTE		Correlation Coefficient	T Value	Degrees of Freedom
	Reported	Assigned			
Lower Instr.	.3716	.3990	.928	-3.20*	91
Upper Instr.	.4798	.5114	.890	-4.19*	222
Graduate Instr.	.2432	.2455	.870	-0.24	64
Thesis	.0787	.0693	.824	1.55	55
Academic Advising	.0870	.0889	.667	-0.55	228
Other Instr.	.0987	.0898	.564	0.88	122
Individual Project	.1773	.1657	.902	1.45	76
Community Services	.0976	.0725	.756	3.44*	102
Management	.4204	.3737	.888	2.76*	67
University Governance	.0607	.0550	.540	1.63	200
Program Develop.	.0904	.0782	.641	0.68	27
Faculty Develop.	.1147	.0737	.945	3.59*	39

*The null hypothesis of no difference between population mean FTE's was rejected at the 10% level of significance.

assigned mean FTE's were rejected at the 10% level of significance in a few cases. A pattern was only observed in the upper instruction and community service categories. Statistically significant differences were observed in the upper instruction category in the colleges of Education, Engineering, Humanities & Fine Arts, and Social Science. In the community service category statistically significant differences were observed in the Colleges of Business Administration, Education, Engineering, Humanities & Fine

TABLE 2

Summary Comparison of Reported and Assigned Mean FTE's
by Selected Activity Category and College

Activity Category	College																	
	Business			Education			Engineering			Hum. & Fine Arts			Natural Sciences			Social Science		
	n	Rep.	Assigned	n	Rep.	Assigned	n	Rep.	Assigned	n	Rep.	Assigned	n	Rep.	Assigned	n	Rep.	Assigned
Lower Instr.	5	.3500	.3360	NA	N.A.	N.A.	9	.3256	.3433	33	.3621	.3836	31	.4368	.4960*	13	.2938	.3492*
Upper Instr.	26	.6485	.6500	26	.4377	.4773*	25	.4372	.4600*	38	.4945	.5397*	63	.4362	.4554	43	.4916	.5463*
Graduate Instr.	6	.2200	.1783	16	.3537	.3850*	12	.2308	.2150	7	.1043	.1314	12	.2133	.2042	10	.2570	.2620
Academic Advising	24	.0729	.0775	27	.1293	.1133	26	.0796	.0704*	35	.0609	.0543	69	.0546	.0714*	43	.1444	.1474
Other Instr.	8	.1612	.1762	8	.1412	.1312	14	.0621	.0700	18	.0100	.0500*	46	.1254	.0991	27	.1037	.0759
Comm. Service	13	.1108	.1385*	19	.1258	.0811*	19	.0442	.0326*	19	.1221	.0437*	9	.0744	.0533	14	.0393	.0286*
Mgmt.	5	.5800	.4880*	5	.3060	.2380	9	.3656	.2578	10	.2410	.1680*	19	.2826	.2489*	5	.3400	.3340
Develop.	2	.0350	.0450	NA	N.A.	N.A.	3	.0133	.0267	5	.3520	.2560	4	.3800	.2725*	26	.0462	.0158*

*The null hypothesis of no difference between population mean FTE's was rejected at the 10% level of significance.

Arts, and Social Sciences. These differences may be attributable to the fact that chairpersons normally make assignments based on a normal workweek and faculty report effort on an extended workweek. In addition, scheduled instruction is defined more precisely than community service.

Table 3 provides a summary of the reported and assigned mean FTE's by Higher Education General Information Survey (HEGIS) discipline for selected activity categories. These data reveal differences between the reported and assigned mean FTE's in several of the HEGIS disciplines. In the upper instructional category, 8 of the 14 null hypotheses were rejected at the 10% level of significance. In the academic advising, other instruction, and community service categories, statistically significant differences were observed in 6 HEGIS disciplines at the 10% level of significance. The discipline analysis also revealed that the assigned upper instruction mean FTE was greater than the reported mean FTE in several disciplines. Based on the assumption that a normal workweek is 40 hours and the fact that faculty report approximately 50 hours, an analysis was completed to determine what impact this difference would have on the number of hours expended in the area of upper division instruction. An analysis of these figures revealed that faculty members expend more time in completing their upper division assigned activities than what a chairperson would normally anticipate in each discipline. For example, in the Biology discipline the number of hours assigned would be approximately 16.6 and the number of hours expended would be 18.7.

An ANOVA test was completed on the reported and assigned mean FTE differences to determine if reporting patterns were uniform among colleges. Table 4 provides an example of the ANOVA summary table for the upper instruction, community services, and faculty development categories. (A complete ANOVA summary table is presented in Appendix B.) This analysis revealed statistically significant differences in the community services and faculty development categories. The community service category was the only major faculty activity area in which differences in reporting patterns were not similar. In the community service category the Newman-Keuls procedure revealed that there was a statistically significant difference between the College of Business Administration mean FTE difference and the College of Humanities & Fine Arts' and the College of Education mean FTE differences. The College of Business Administration assigned mean FTE exceeded the reported mean FTE whereas the opposite was observed in the College of Humanities & Fine Arts and the College of Education. Although the ANOVA analysis revealed a statistically significant difference in the faculty development category, the Newman-Keuls procedure did not

TABLE 3

Summary Comparison of Reported and Assigned Mean FTE's
by Discipline for Selected Activity Categories

HEGIS Discipline	Upper Instruction			Graduate Instruction			Academic Advising			Other Instruction			Community Service		
	n	Reported	Assigned	n	Reported	Assigned	n	Reported	Assigned	n	Reported	Assigned	n	Reported	Assigned
0400	9	.3733	.3311*	5	.1760	.1900	12	.0583	.0783*	5	.0360	.0680*	3	.1667	.1033
0500	26	.6485	.6500	6	.2200	.1783	24	.0729	.0775	8	.1612	.1762	13	.1108	.1385*
0600	13	.5431	.6400*	1	.3000	.2200	14	.1093	.1500*	10	.2290	.1180*	3	.0767	.0600
0700	12	.3575	.4217	6	.2567	.2267	14	.0343	.0536*	9	.1956	.0833	NA	N.A.	N.A.
0800	26	.4377	.4773*	16	.3537	.3850*	27	.1293	.1133	8	.1412	.1312	19	.1258	.0811*
0900	25	.4372	.4600*	12	.2308	.2150	26	.0796	.0704*	14	.0621	.0700	19	.0442	.0326*
1000	14	.4893	.5914*	5	.0700	.1340*	9	.0433	.0378	6	.0067	.0350*	7	.2214	.0600*
1100	11	.4718	.4500	NA	N.A.	N.A.	11	.0645	.0682	6	.0000	.0617*	NA	N.A.	N.A.
1200	15	.4647	.5873*	NA	N.A.	N.A.	15	.1127	.1260	15	.1193	.0740*	2	.0550	.0450
1500	15	.4780	.5213*	4	.1400	.1025	19	.0632	.0484	8	.0300	.0525	21	.1124	.0924*
1700	14	.5300	.5129	1	.1400	.1400	14	.0364	.0571*	6	.1117	.1117	NA	N.A.	N.A.
1900	13	.4185	.3585	NA	N.A.	N.A.	14	.0279	.0393*	11	.1245	.1536	4	.0150	.0200
2000	16	.3580	.3293	8	.2500	.2687*	15	.1487	.1480	10	0	.0630*	9	.0211	.0189
2100	15	.5807	.6820*	1	.2700	.2500	14	.1750	.1443	7	.0729	.0343	2	.0650	.0250*

*The null hypothesis of [illegible]fference between population mean FTE [illegible]as rejected [illegible] the 10% level of significance.

TABLE 4

ANOVA Summary for Reported and Assigned Mean FTE Differences for Selected Activity Categories

Source	D.F.	Sum of Squares	Mean Squares	F Ratio
Upper Instruction				
Between Group	6	.0683	.0114	.897
Within Group	216	2.7430	.0127	
Total	222	2.8113		
Community Service				
Between Group	6	.1071	.0179	3.797*
Within Group	95	.4468	.0047	
Total	101	.5539		
Faculty Develop.				
Between Group	4	.0498	.0125	2.827*
Within Group	35	.1542	.0044	
Total	39	.2040		

*The null hypothesis concerning population mean FTE differences was rejected at the .05 level of significance.

reveal any differences among the colleges. In general it appears that reporting patterns among colleges are very similar in the scheduled instruction, instructional related, and research categories.

Summary and Conclusions

The use of faculty activity data has increased markedly during the past two decades. Currently these data support cost analysis, evaluation, planning, and reporting procedures. The two common procedures used in reporting faculty activity data include the chairperson's assignment of faculty by activity category and a post hoc report provided by the faculty based on hours worked per week.

The findings of this study revealed a high degree of similarity among assigned and reported mean FTE's at the university level. Statistically significant differences were observed in the lower instruction, upper instruction,

community service, management, and faculty development categories. The correlation coefficients revealed a high degree of association between the two measures of faculty activity. At the college level, differences were observed in the upper instruction and community service categories for several of the colleges. These differences revealed that in general faculty reported a smaller proportion of their effort on scheduled instructional activities than had been assigned and more on the non-instructional activities.

At the HEGIS discipline level, several differences were observed in the upper instruction, academic advising, other instruction, and community service categories. However, the discipline analysis revealed differences in the common reporting patterns that were observed in the college and university comparisons.

An ANOVA test on the difference between reported and assigned mean FTE's revealed a difference in the community service and faculty development categories. These findings revealed that even though differences exist between the mean FTE's at several levels and in several HEGIS disciplines, reporting patterns at the college level are very similar in the instruction and research categories.

The findings of this study indicate that cost analysis outputs at the HEGIS discipline and activity category level may be somewhat different depending upon whether assigned FTE or reported FTE data are utilized. The difference associated with the two procedures would tend to decrease the instructional costs and increase the community service and non-instructional costs if faculty reported data were utilized.

APPENDIX B

ANOVA Summary for Reported and Assigned Mean FTE Differences by Activity Category

Activity	Between Group			Within Group			Total		F Ratio
	D.F.	Sum of Squares	Mean Squares	D.F.	Sum of Squares	Mean Squares	D.F.	Sum of Squares	
Lower Instr.	5	.0222	.0044	86	.5928	.0069	91	.6150	.644
Upper Instr.	6	.0683	.0114	216	2.7430	.0127	222	2.8113	.897
Grad. Instr.	6	.0359	.0060	58	.3390	.0058	64	.3750	1.024
Thesis	4	.0062	.0016	51	.1091	.0021	55	.1153	.726
Academic Adv.	6	.0310	.0052	221	.6085	.0028	227	.6395	1.879
Other Instr.	6	.0753	.0125	116	1.446	.0125	122	1.5198	1.007
Ind. Project	6	.0131	.0022	70	.3581	.0051	76	.3712	.426
Comm. Service	6	.1071	.0179	95	.4468	.0047	101	.5539	3.797*
Management	6	.0960	.0160	60	1.2090	.0201	66	1.3050	.794
Univ.Govern.	6	.0272	.0045	194	.4601	.0024	200	.4873	1.913
Program Dev. Faculty Dev.	4	.0498	.0125	35	.1542	.0044	39	.2040	2.827*

*The null hypothesis of no difference between population mean FTE's was rejected at the .05 level of significance.

Note: Due to the limited number of faculty who were assigned activities in the Institutes and Research Centers and Community Education categories, these categories were eliminated from this analysis.

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